

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. - 12. (canceled).

13. (currently amended): A longitudinal implant and connecting device wherein said longitudinal implant is fastenable to bones on either side of a damaged area through said connecting device, said implant and connecting device comprising:

a longitudinal implant made of a filament or fiber composite material, wherein filaments or fibers in said material are oriented to resist biomechanical forces, and

a connecting device made of a material harder than said longitudinal implant,

wherein, said connecting device is operative to squeeze and lock the longitudinal implant into position both by depression caused by a squeezing and increased friction between the harder material of the connecting device and the composite material of the longitudinal implant, and

wherein the implant is one of an elongated structure, the structure having a longitudinal slot extending along a substantial portion of its length and wherein filaments or fibers are aligned lengthwise, so that compression will not change their strength characteristics to any extent even when compressed, and

wherein the implant is formed without any recesses, bevels, or slants, adjacent to the longitudinal slot.

14. (previously presented): The longitudinal implant and connecting device according to claim 13, wherein the longitudinal implant is made of a carbon filament composite material.

15. (previously presented): The longitudinal implant and connecting device according to claim 13 or 14, wherein the filaments are encapsulated in a polymer matrix.

16. (previously presented): The longitudinal implant and connecting device according to claim 15, wherein the filaments are encapsulated in PEEK or PEKEKK.

17. (previously presented): The longitudinal implant and connecting device according to claim 13, wherein the connecting device comprising a pedicle screw having an upper section having a width greater than the width of said slot and an exteriorly threaded portion extending outwardly from said section and extending through said slot.

18. (previously presented): The longitudinal implant and connecting device according to claim 17, wherein an interiorly threaded nut is received by an outer end of said threaded portion whereby said plate can be grasped between said upper section and said nut to tightly secure said plate by threading said upper section.

19. (previously presented): The longitudinal implant and connecting device according to claim 13, wherein said connecting device comprises a screw and a nut, each of which is made of titanium.

20. (previously presented): The longitudinal implant and connecting device according to claim 13, wherein said implant is a rail having a rectangular cross section.

21. (previously presented): The longitudinal implant and connecting device according to claim 13, wherein said implant is a plate.

22. (previously presented): The longitudinal implant and connecting device according to claim 13, wherein said implant is a rod.

23. (previously presented): The longitudinal implant and connecting device according to claim 13 or 14, wherein the filaments are woven, comprising first filaments that are oriented in the axial direction of the implant, and second filaments that are oriented perpendicular to the axial direction of the implant.

24. (previously presented): The longitudinal implant and connecting device according to claim 13, wherein the implant is formed with no depressions and indentations adjacent to the longitudinal slot.